

dissolving the dry solid product (S3) in a solvent and subjecting it to liquid column chromatography.

18. The method of claim 17, wherein the liquid column chromatography uses silica gel and/or alumina as a filler, and a mixed solution of hexane/ethanol in a volume proportion of 70/30 to 97/3 as an eluent.--

#### REMARKS

Claims 1-7 are pending in the present application. Claim 1 has been amended to more particularly describe the components of the cosmetic composition of the present invention. Claims 4-7 have been cancelled. New claims 15-18 have been added to the application claiming methods for obtaining the polymethoxyflavone of claim 1. The amendments are supported at page 13, line 1, to page 14, line 7 and page 24, Table 4 (ascorbic acid and its salts or esters), of the specification. The amendments place the claims in better form for appeal.

The present invention is directed to a cosmetic composition that includes a polymethoxyflavone whitening agent and an aqueous base. The whitening agent may be one or more of ascorbic acid and its salts or esters, hydroquinone, placental extracts, and ellagic acid. The present cosmetic compositions are used for whitening skin.

Claims 1-3 stand rejected under 35 U.S.C. § 112, second paragraph, as the Examiner indicated that the term "derivatives" was indefinite, i.e., not defined in the specification. In light of the present amendments removing the term "derivatives," Applicants submit that this rejection should be withdrawn.

Claims 1-3 stand rejected under 35 U.S.C. § 102(b) as being anticipated by United States Patent No. 3,598,841 to Swift (hereinafter "the Swift patent") as supported by United States Patent No. 3,771,535 to Mezoff (hereinafter "the Mezoff patent"). The Examiner asserts that the Swift patent discloses that nobiletin is present in oranges at levels as high as 0.1

g/l and that vitamin C (ascorbic acid) is present in oranges (roughly 50 mg) according to the Mezoff patent.

The Swift patent discloses a process for converting tangeretin to nobiletin, which is effective against a fungus that affects citrus seedlings.

The presently claimed invention is directed to a cosmetic composition that includes a polymethoxyflavone, a whitening agent, and a base consisting essentially of water and one or more additives selected from lower alcohols, polyhydric alcohols, hydrocarbon oils, natural fats, natural oils, synthetic triglycerides, ester oils, waxes, polysiloxanes, oils, anionic surfactants, amphoteric surfactants, nonionic surfactants, cationic surfactants, semipolar surfactants, water soluble polymers, organic salts, inorganic salts, anti-inflammatory agents, pH regulators, germicidal agents, chelating agents, antioxidants, ultra violet absorbers, pigments, and fragrances.

The Swift patent does not disclose, or in any way suggest or motivate one skilled in the art, to combine one or more of the recited additives with water, a polymethoxyflavone, and a whitening agent. In order to anticipate a claim, a reference must disclose every limitation recited in the claim. As the Swift patent does not disclose the additives recited in claim 1, it cannot anticipate claim 1, and the rejection of claims 1-3 under 35 U.S.C. § 102(b) should be withdrawn.

Claims 4-7 stand rejected under 35 U.S.C. § 103 (a) for alleged obviousness over Machida et al. (Chem. Pharm. Bull., Vol. 37, No. 4, pp 1092-1094) in view of Williamson (Macroscale and Microscale Organic Experiments, 1989, pp. 116-118 and 152-153). The Examiner indicates his belief that it would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the extraction and eluent solvent system of Machida et al. by routine optimization as taught by Williamson because solvent polarity was the

critical parameter, Williamson teaches likely successful choices, and that applying a general extraction process in the prior art to a particular starting material is not a patentable invention.

Machida et al. teaches ethanol extraction of a peel of a plant of genus Citrus and partitioning using ether. Williamson teaches general methods for isolating a substance.

New claims 15-18 correspond to cancelled claims 4-7, which were written to depend either directly or indirectly from claim 1. As such, they include the limitations of claim 1.

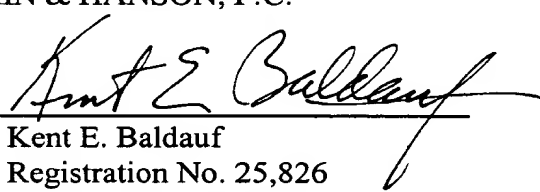
As no combination of Machida et al. and Williamson teaches or suggests in any way a cosmetic composition that includes a polymethoxyflavone, a whitening agent, and a base, where the polymethoxyflavone is obtained as claimed in claims 15-18, the claims are not obvious over Machida et al. and Williamson. Therefore, the rejection of claims 4-7 under 35 U.S.C. § 103(s) as applied to new claims 15-18 should be withdrawn.

In view of the above amendments and remarks, reconsideration of the rejections and allowance of claims 1-3 and 15-18 are respectfully requested.

Respectfully submitted,

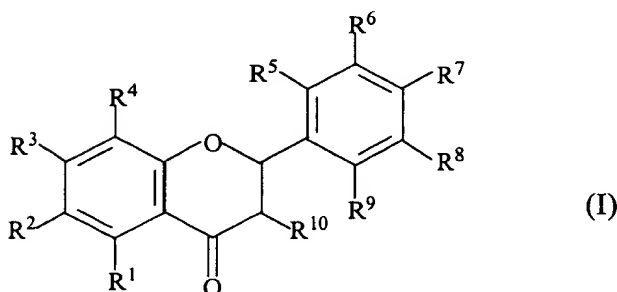
WEBB ZIESENHEIM LOGSDON  
ORKIN & HANSON, P.C.

By

  
Kent E. Baldauf  
Registration No. 25,826  
Attorney for Applicants  
700 Koppers Building  
436 Seventh Avenue  
Pittsburgh, PA 15219-1818  
Telephone No. 412.471.8815  
Facsimile No. 412.471.4094  
E-mail [webblaw@webblaw.com](mailto:webblaw@webblaw.com)

**Marked-Up Version of Claim 1**

1. (Twice Amended) A cosmetic composition comprising:
- (a) 0.00005 to 10 wt\_% of polymethoxyflavone represented by formula (I):



wherein each of R<sup>1</sup>, R<sup>2</sup>, R<sup>3</sup>, R<sup>4</sup>, R<sup>5</sup>, R<sup>6</sup>, R<sup>7</sup>, R<sup>8</sup>, R<sup>9</sup>, and R<sup>10</sup> is selected from the group consisting of hydrogen atom, hydroxyl group, alkoxy group having 1 to 20 carbon atoms, alkyl group having 1 to 20 carbon atoms, alkenyl group having 2 to 20 carbon atoms, hydroxyalkyl group having 1 to 20 carbon atoms or a sugar residue, and at least four of R<sup>1</sup>, R<sup>2</sup>, R<sup>3</sup>, R<sup>4</sup>, R<sup>5</sup>, R<sup>6</sup>, R<sup>7</sup>, R<sup>8</sup>, R<sup>9</sup>, and R<sup>10</sup> are methoxy groups; [and]

(b) 0.01 to 10 wt\_% of a whitening agent selected from the group consisting of ascorbic acid and its [derivatives] salts or esters, hydroquinone [and its derivatives], placental extracts, ellagic acid [and its derivatives], and mixtures thereof; and

(c) the remainder being a base consisting essentially of water and at least one selected from the group consisting of lower alcohols, polyhydric alcohols, hydrocarbon oils, natural fats, natural oils, synthetic triglycerides, ester oils, waxes, polysiloxanes, oils, anionic surfactants, amphoteric surfactants, nonionic surfactants, cationic surfactants, semipolar surfactants, water soluble polymers, organic salts, inorganic salts, anti-inflammatory agents, pH regulators, germicidal agents, chelating agents, antioxidants, ultra violet absorbers, pigments, and fragrances.